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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,889	01/22/2007	Thorsten Wohland	40594	8309

38505 7590 12/31/2007

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EXAMINER	
TANINGCO, MARCUS H	

ART UNIT	PAPER NUMBER
2884	

MAIL DATE	DELIVERY MODE
12/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,889	WOHLAND ET AL.	
	Examiner	Art Unit	
	Marcus H. Taningco	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/06/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 7, 8, 11, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Heinze et al. (*Heinze*, US 2004/0022684).

With regards to claims 1 and 15, Heinze discloses a fluorescence measurement method comprising: marking at least two fluorescent markers on one or more analytes to be analyzed, wherein said markers are excited with the same excitation wavelength using a single laser and detecting the emitted wavelengths, said emitted wavelengths having different wavelengths; and processing the detected emission signals to obtain fluorescence correlation data [0009], said detected signals being separated by wavelength by an optical system of a spectrometer (Fig. 1).

With regards to claim 2, Heinze discloses said emission signals have spectrally separate fluorescence emissions, wherein one of the markers has a larger Stokes shift than another [0009].

With regards to claim 5, Heinze discloses said markers may comprise quantum dots [0036].

With regards to claim 7, Heinze discloses a standard organic dye may be used [0036].

With regards to claim 8, Heinze discloses said markers comprise fluorescein and quantum red [0036].

With regards to claim 11, Heinze discloses using three or more fluorophores [0017].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 4, 6, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinze et al. in view of Weiss et al. (*Weiss*, US 2002/0064789) and Craig et al. (*Craig*, US 2003/0203407).

With regards to claims 3, 4, 6, and 10, Heinze fails to specifically teach the relative Stokes shift difference between said markers being greater than about 100nm. Weiss teaches a method for the identification of two or more species of interest in a sample comprising: fluoresccent probes (energy transfer dyes (Abstract), semiconductor nanocrystals [0093], transfluorospheres, or quantum dots [0098] being excited by a single laser wavelength; and detecting emission signals, wherein the emission signal of each probe differ in their emission properties [0098]. Peak emissions were detected at 540 and 620 nm (*Stokes shift difference of 80nm*) [0108]. Those skilled in the art appreciate that, absent some degree of criticality, the choice of fluorescent probe (*those having a Stokes shift difference of greater than 100nm*) would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application. Craig teaches a method of fluorescence correlation spectroscopy [0150] comprising fluorescein and tetramethylrhodamine fluorophores [0197].

With regards to claims 12-14, those skilled in the art appreciate that, absent some degree of criticality, the specific type of binding partners would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application as evidenced by the method taught by Craig, wherein said method utilizes biotin and streptavidin. Furthermore, said biotin and streptavidin having a mass difference of less than a factor of 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CONSTANTINE HANNAHER
PRIMARY EXAMINER

Marcus Taningco
Patent Examiner
GAU 2884